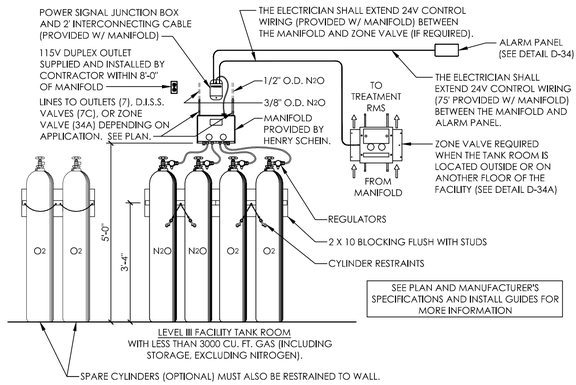


THIS DETAIL IS FOR INFORMATIONAL PURPOSES ONLY. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.

INSTALLATION REQUIREMENTS:
TO ASSURE SAFE OPERATION AND CONFORMATION TO LOCAL FIRE CODES, ALL PORTER INSTRUMENT MANIFOLD SYSTEMS ARE DESIGNED TO BE USED WITH SEDATION DELIVERY SYSTEMS MOUNTED INSIDE WALLS AND THEY MEET OR EXCEED THE GUIDELINES ESTABLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION FOR NONFLAMMABLE MEDICAL GAS SYSTEMS, NFPA 99. COPIES OF NFPA 99 OR PORTIONS THEREOF MAY BE OBTAINED BY WRITING TO:
NATIONAL FIRE PROTECTION ASSOCIATION
1 BATTERYMARCH PARK, QUINCY, MA 02169-7471
VISITING http://www.nfpa.org, OR CALLING: 1-800-344-3555

TANK ROOM GUIDELINES:
1. ROOM OR ENCLOSURE SHALL NOT BE USED FOR ANY PURPOSE OTHER THAN STORAGE OF NONFLAMMABLE GAS CYLINDERS, FULL OR EMPTY.
2. AIR COMPRESSORS AND VACUUM PUMPS SHALL BE LOCATED IN A SEPARATE ENCLOSURE THAN THAT OF THE CYLINDERS.
3. ROOM OR ENCLOSURE SHALL BE CONSTRUCTED OF AN ASSEMBLY OF BUILDING MATERIALS WITH A FIRE RESISTANCE RATING OF AT LEAST ONE HOUR.
4. TANK ROOM DOOR SHALL LOCK.
3. WHERE NATURAL VENTILATION IS PERMITTED, CONTRACTOR SHALL PROVIDE AND INSTALL TWO LOUVERED OPENINGS, EACH HAVING A FREE AREA MINIMUM OF 72 SQ. INCHES. ONE LOCATED WITHIN 1'-0" OF THE FLOOR AND ONE LOCATED WITHIN 1'-0" OF THE CEILING. THE LOUVERS CAN BE IN THE WALL ADJACENT TO THE DOOR OR IN THE DOOR, DEPENDING ON THE CLOSET. ANY ADDITIONAL VENTILATION TO BE DETERMINED BY ARCHITECT.
4. LOUVERED NATURAL VENTILATION OPENINGS SHALL NOT BE LOCATED IN AN EXIT ACCESS CORRIDOR.
5. ATTACH TANK RESTRAINERS WITH LAG SCREWS. INSTALL 40" FROM THE FLOOR.
6. TANK ROOM INSTRUCTIONS AND CAUTION FOR NONFLAMMABLE MEDICAL GASES IN USE MUST BE POSTED.

HENRY SCHEIN'S RESPONSIBILITIES:
1. VERIFY THAT THE SYSTEM HAS BEEN TESTED FOR LEAKS.
2. INSTALL WALL MOUNTS OR CABINET MOUNTS IN APPROPRIATE LOCATIONS.
3. INSTALL COVER PLATES ON OUTLET STATIONS.
4. INSTALL FLOWMETER HEADS.
5. TEST THE SYSTEM FOR CROSSED LINES. REFER TO SECTION "TEST FOR CROSSED LINES" UNDER PLUMBERS INSTRUCTIONS AND PERFORM TEST. DO NOT ASSUME THE SYSTEM HAS BEEN TESTED.
6. TEST FOR FAILSAFE OPERATION.
7. CHECK ALARM.
8. DEMONSTRATE SYSTEM TO OWNER.

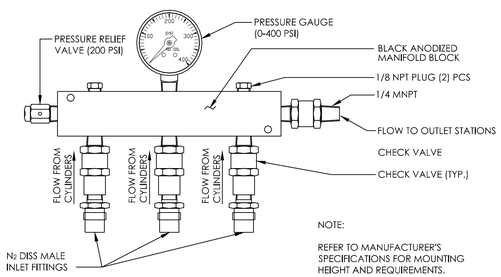
NOTE: SEE MANUFACTURER'S INSTALLATION GUIDE FOR CONTRACTOR'S RESPONSIBILITIES

LEVEL III SYSTEMS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING REQUIREMENTS:
1. NO MORE THAN 3000 CUBIC FEET TOTAL CAPACITY OF ALL GASES (EXCLUDING NITROGEN) CAN BE CONNECTED AND IN STORAGE AT ONE TIME.
2. ENCLOSURE FOR SUPPLY SYSTEMS SHALL BE PROVIDED WITH DOORS OR GATES THAT MAY BE LOCKED.
3. WHERE NATURAL VENTILATION IS PERMITTED, CONTRACTOR SHALL PROVIDE AND INSTALL TWO LOUVERED OPENINGS, EACH HAVING A FREE AREA MINIMUM OF 72 SQ. INCHES. ONE LOCATED WITHIN 1'-0" OF THE FLOOR AND ONE LOCATED WITHIN 1'-0" OF THE CEILING. THE LOUVERS CAN BE IN THE WALL ADJACENT TO THE DOOR OR IN THE DOOR, DEPENDING ON THE CLOSET. ANY ADDITIONAL VENTILATION TO BE DETERMINED BY ARCHITECT.
4. EACH CYLINDER OF GAS SHALL HAVE A LISTED PRESSURE REGULATOR DIRECTLY CONNECTED.
5. A PRESSURE RELIEF VALVE SET AT 50 PERCENT ABOVE (75 PSIG.) NORMAL LINE PRESSURE (50 PSIG).
6. A SHUT-OFF VALVE OR CHECK VALVE SHALL BE INSTALLED DOWNSTREAM OF EACH PRESSURE REGULATOR.
7. A PRESSURE GAUGE SHALL BE INSTALLED IN THE MAIN LINE ADJACENT TO THE ACTUATING SWITCH AND IT SHALL BE APPROPRIATELY LABELED.
8. PIPING SHALL BE SEAMLESS TYPE K OR L (ASTM B88) COPPER TUBING, THOROUGHLY CLEANED OF OIL GREASE AND TEMPORARILY CAPPED OR PLUGGED TO PREVENT RECONTAMINATION.
9. FLEXIBLE CONNECTORS OTHER THAN ALL-METAL CONSTRUCTION USED TO CONNECT OUTLETS OF PRESSURE REGULATORS TO FIXED PIPING SHALL HAVE A MINIMUM BURST PRESSURE OF 1000 PSIG AND SHALL NOT PENETRATE WALLS, FLOORS, CEILINGS, OR PARTITIONS.
10. BEFORE CLOSING OF THE WALLS, EACH SECTION OF THE PIPING SYSTEM, EXCLUDING MANIFOLD, SHALL BE SUBJECTED TO A MINIMUM PRESSURE TEST OF 60 PSIG WITH OIL-FREE, MEDICAL GRADE DRY NITROGEN. THIS PRESSURE TEST SHALL BE MAINTAINED UNTIL EACH JOINT HAS BEEN EXAMINED FOR LEAKAGE, AND ANY LEAKS LOCATED SHALL BE REPAIRED AND RETESTED AS ABOVE. AFTER TESTING AS ABOVE, THE COMPLETELY ASSEMBLED PIPING SYSTEM SHALL BE SUBJECTED TO A 24-HOUR STANDING PRESSURE TEST AT 60 PSIG LINE PRESSURE USING REQUIRED TEST GAS.
11. PIPING SYSTEMS, WITH THE EXCEPTION OF NITROGEN SYSTEMS, SHALL BE CAPABLE OF DELIVERING 50 TO 55 PSIG TO ALL OUTLETS AT THE MAXIMUM FLOW RATE.
12. ALL BRAZED JOINTS IN THE PIPING SHALL BE MADE UP USING BRAZING FILLER ALLOYS THAT BOND WITH THE BASE METALS BEING BRAZED AND THAT COMPLY WITH "SPECIFICATIONS FOR BRAZING FILLER METAL," ANSI/AWS A5.8. A) COPPER-TO-COPPER JOINTS SHALL BE MADE USING A COPPER-PHOSPHORUS BRAZING FILLER ALLOY (BCUP SERIES) WITHOUT FLUX. B) DISSIMILAR METALS SUCH AS COPPER AND BRASS SHALL BE JOINED USING AN APPROPRIATE FLUX WITH EITHER A COPPER-PHOSPHORUS (BCUP SERIES) OR A SILVER (BAG SERIES) BRAZING FILLER ALLOY. APPLY FLUX SPARINGLY AND IN A MANNER TO AVOID LEAKING ANY EXCESS INSIDE OF COMPLETED JOINTS. USE OF PRE-FLUXED ROD IS ACCEPTABLE.
13. AUDIBLE AND NON-CANCELABLE VISUAL SIGNALS SHALL INDICATE IF THE PRESSURE IN THE MAIN LINE INCREASES OR DECREASES 20 PERCENT FROM THE NORMAL OPERATING PRESSURE, AND SHALL BE INSTALLED IN THE OFFICE OR PRINCIPAL WORKING AREA OF THE INDIVIDUAL RESPONSIBLE FOR THE MAINTENANCE OF THE MEDICAL GAS SYSTEM. TO ASSURE CONTINUOUS SURVEILLANCE.
14. WHERE THE CENTRAL SUPPLY IS REMOTE FROM THE MEDICAL GAS SYSTEMS USE POINTS, THE MAIN SUPPLY LINE SHALL BE PROVIDED WITH A SHUT-OFF VALVE SO LOCATED IN THE TREATMENT FACILITY AS TO BE ACCESSIBLE FROM USE-POINT LOCATIONS IN AN EMERGENCY.
15. OUTLET STATIONS SHALL BE DESIGNED SO THAT PARTS OR COMPONENTS THAT ARE REQUIRED TO BE GAS SPECIFIC CANNOT BE INTERCHANGED BETWEEN STATION OUTLETS FOR DIFFERENT GASES.
16. LABELING SHALL APPEAR ON THE PIPING AT INTERVALS OF NOT MORE THAN 20 FT. AND AT LEAST ONCE IN EACH ROOM AND EACH STORY TRAVERSED BY THE PIPING SYSTEMS.

D-33 PORTER VANGUARD N_2O, O_2 SYSTEM MANIFOLD

NOT TO SCALE

FOLLOW NFPA-99 STANDARDS FOR LEVEL 3 NITROGEN SYSTEMS. LOCAL BUILDING AND FIRE CODES MAY SUPERSEDE NFPA-99. IMPORTANT: VERIFY LOCAL REQUIREMENTS BEFORE BEGINNING CONSTRUCTION.



NOTE:

REFER TO MANUFACTURER'S SPECIFICATIONS FOR MOUNTING HEIGHT AND REQUIREMENTS.

D-33A NITROGEN MANIFOLD

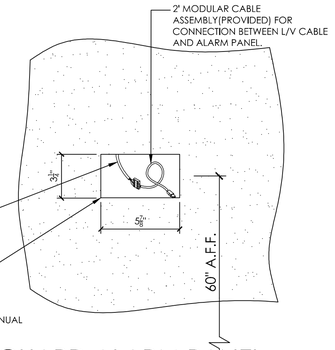
NOT TO SCALE

ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL LOCAL CODES FOR ROUGH INSTALLATION. HENRY SCHEIN TO MAKE FINAL CONNECTIONS.

ELECTRICIAN TO RUN L/V CABLING (75' PROVIDED BY MANUFACTURER) BETWEEN ALARM PANEL AND POWER SIGNAL JUNCTION BOX ABOVE NITROUS OXIDE MANIFOLD (33) AT FINISH. LENGTHS BEYOND 75' PROVIDED BY ELECTRICIAN.

CUT OPENING IN GYP. BRD. FOR ALARM PANEL. SECURE ALARM PANEL TO WALL USING MOLLY FASTENERS (PROVIDED).

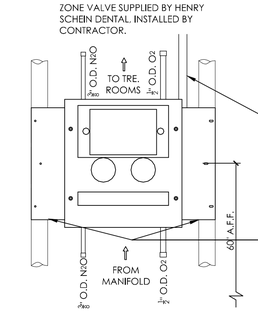
SEE MANUFACTURER'S INSTALLATION MANUAL FOR MORE INFORMATION.



D-34 PORTER VANGUARD ALARM PANEL

NOT TO SCALE

ZONE VALVE SUPPLIED BY HENRY SCHEIN DENTAL. INSTALLED BY CONTRACTOR.



NOTE: WHEN USING A ZONE VALVE WITH THE PORTER NITROUS SYSTEM, ELECTRICIAN TO PROVIDE AND INSTALL A SINGLE GANG BOX IN TANK ROOM NEAR MANIFOLD FOR L/V CABLING FROM ZONE VALVE. RUN 3/4" CONDUIT FROM BOX TO 3" ABOVE CEILING (OR CONTINUOUS TO ZONE VALVE WHEN PLENUM SPACE IS NOT ACCESSIBLE).

ELECTRICIAN TO RUN 3/4" CONDUIT FROM ZONE VALVE TO 3" ABOVE CEILING (OR CONTINUOUS TO TANK ROOM WHEN PLENUM SPACE IS NOT ACCESSIBLE). RUN L/V CABLING (100' PROVIDED BY MANUFACTURER) BETWEEN ZONE VALVE AND TANK ROOM AT FINISH.

CONTRACTOR TO MOUNT ZONE VALVE BETWEEN STUDS DURING FRAMING.

SEE MANUFACTURER'S INSTALLATION GUIDE FOR MORE INFORMATION.

D-34A PORTER VANGUARD ZONE VALVE

NOT TO SCALE

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 02/25/15

HENRY SCHEIN DENTAL
10920 WEST LINCOLN AVENUE
WEST ALLIS, WI 53227

PROJECT: **SOUTHERN MAINE ORAL SURGERY**

LOCATION: 131 JOHNSON ROAD
PORTLAND, ME 04102

HENRY SCHEIN REP: JESSE LEVEILLE
CENTER: BOSTON, MA
PHONE #: (207) 233-4978

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DRAWING NAME: SMOS-1c-D
PROJECT START DATE: 08/11/2014
FINALS START DATE: 08/20/2014
DRAWN BY: AKL/CAS
FINALS BY: AKL
CHECKED BY: TJK

REVISIONS:

10/24/14	AKL
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INT.SQ.FT.=	3992

SCALE: SEE DTL.
SHT. SIZE: D

MECHANICAL DETAILS

SPE.2

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